

ABSTRACT

The development of a web-based backend application for digital signage content management and podcast laboratory scheduling was carried out to address the need for an integrated information system at the Faculty of Applied Sciences, Telkom University. The application, named “Podsync”, offers key features such as digital signage content management (CRUD for YouTube links with auto-generated QR codes), Google Sheets API integration for real-time laboratory booking data synchronization, broadcast management system for live status control, and dashboard analytics for laboratory usage data visualization. The development process used the Agile-Scrum methodology over four sprints from April to June 2025. Implementation results show that the application improves the efficiency of laboratory scheduling management, minimizes human error, and accelerates information distribution to the academic community. With this integrated system, the management of podcast laboratory facilities and digital signage information delivery becomes more effective, efficient, and easily accessible.

Keywords: *content management, digital signage, podcast laboratory, web backend, Google Sheets API, dashboard analytics.*